WHAT IS CLAIMED IS

1. A purification material for fluids, wherein the material comprises apatite and a binder therefor, and is in the form of a porous block or a sheet.

2. The purification material of claim 1, in the form of a porous block.

3. The purification material of claim 2, wherein the porous block is rigid.

4. The purification material of claim 1, in the form of a porous sheet.

5. The purification material of claim 4, wherein the porous sheet is rigid.

6. The purification material of claim 4, wherein the porous sheet is flexible.

7. The purification material of claim 1, wherein at least a portion of said apatite is in the form of hydroxylapatite.

8. The purification material of claim 1, wherein the binder is a polymer material.

9. The purification material of claim 8, wherein the binder is a polymer melting between about 50 °C and about 500 °C.

10. The purification material of claim 9, wherein the polymer is stable under sterilization conditions.

11. The purification material of claim 8, wherein said binder is selected from the group consisting of thermoplastics, polyethylene glycols or a derivative thereof, polyvinyl alcohols, polyvinylacetate, and polylactic acids.

12. The purification material of claim 11, wherein the thermoplastic is selected from the group consisting of nylon, polyethylene, polyvinylchloride, fluorocarbon resins, polystyrene, polypropylene, cellulosic resins, and acrylic resins.

13. The purification material of claim 8, wherein the polymer material comprises a naturally occurring polymer.

14. The purification material of claim 8, wherein the polymer material comprises an electrically conductive polymer.

15. The purification material of claim 13, wherein the naturally occurring polymer is selected from the group consisting of natural and synthetically modified celluloses, collagens, and organic acids.

16. The purification material of claim 8, wherein the polymer material comprises a biodegradable polymer.

17. The purification material of claim 16, wherein the biodegradable polymer is a polyethyleneglycol, a polylactic acid, a polyvinylalcohol, or a co-polylactideglycolide.

18. The purification material of claim 8, wherein the purification material is in the form of a sheet and is disposed on a woven web.

19. The purification material of claim 8, wherein the purification material is in the form of a sheet and is disposed on a nonwoven web.

20. The purification material of claim 1, wherein the binder is present in an amount ranging from about 10 wt% and about 99.9 wt% of the total weight of the purification material.

21. The purification material of claim 1, further comprising one or more additional adsorptive

materials different from apatite.

22. The purification material of claim 21, wherein said additional adsorptive material comprises granulated activated charcoal.

23 The purification material of claim 22, wherein at least a portion of said apatite is present in the form of bone char.

24. The purification material of claim 23, wherein said bone char and said granulated charcoal are present in approximately equal amounts.

25. The purification material of claim 24, wherein said bone char and said activated charcoal are each present in amounts of about 42.5 wt%, and said binder is present in an amount of about 15 wt%, based upon the total weight of said purification material.

26. The purification material of claim 21, wherein said additional adsorptive material comprises an ion-binding material selected from the group consisting of synthetic ion exchange resins, zeolites, and phosphate minerals.

27. The purification material of claim 26, wherein the phosphate minerals are members of the

phosphate class of minerals.

28. The purification material of claim 26, wherein the phosphate minerals are members of the apatite group of minerals.

29. The purification material of claim 26, wherein the synthetic ion exchange resins are functionalized styrenes, vinylchlorides, divinyl benzenes, methacrylates, acrylates, and mixtures, copolymers, and blends thereof..

30. The purification material of claim 26, wherein the natural or synthetic zeolites are silicate containing minerals known as clinoptilolite

31. The purification material of claim 1, further comprising one or more materials that undergo an oxidation or a reduction in the presence of water or aqueous fluid.

32. A device for filtering microbiological contaminants from water or aqueous fluid, comprising:

a housing;

a porous block of the purification material of claim 1.

33. The device according to claim 32, wherein the housing comprises an inlet, an outlet, and a contacting chamber therebetween, and wherein said rigid porous block is disposed within the contacting chamber, such that fluid can flow into the housing from the inlet passes through the porous block and then can flow out of the housing through the outlet.

34. A method for filtering a fluid to remove any microorganisms therefrom, comprising causing the fluid to flow through the purification material of claim 1, thereby obtaining filtered fluid.

35. The method of claim 34, wherein said fluid is water.

36. The method of claim 35, wherein the filtered water is potable.

37. The method of claim 34, wherein said fluid is an aqueous solution.

38. The method of claim 37, wherein said aqueous solution is blood.

39. The method of claim 37, wherein said aqueous solution is a fermentation broth.

40. The method of claim 37, wherein said aqueous solution is a recycled stream in a chemical or biological process.

41. The method of claim 40, wherein the aqueous solution is a recycled stream in a cell culturing process.

42. The method of claim 40, wherein the aqueous solution has been used in a surgical procedure.

43. The method of claim 34, wherein the fluid comprises breathable air.

44. The method of claim 34, wherein the fluid comprises a purge gas.

45. The method of claim 44, wherein the purge gas is selected from the group consisting of O_2,CO_2, N_2, or Ar.

46. The method of claim 34, wherein the fluid is an anesthetic gas.

47. The method of claim 46, wherein the anesthetic gase comprises nitrous oxide.

48. The method of claim 34, further comprising regenerating said purification material by sterilization.

49. The method of claim 48, wherein said sterilization comprises exposing the purification material to elevated temperature, pressure, radiation levels, or chemical oxidants or reductants, or a combination thereof.

50. The method of claim 49, wherein said sterilization comprises autoclaving.

51. The method of claim 49, wherein said sterilization comprises electrochemical treatment.

52. The method of claim 49, wherein said sterilization comprises a combination of chemical oxidation and autoclaving.

53. The method of claim 34, wherein said fluid is a gaseous mixture.

54. The method of claim 53, wherein the filtered gas is air.

55. The method of claim 34, wherein said fluid is a chemically unreactive gas.

56. The method of claim 55, wherein said gas is oxygen, carbon dixoide, nitrogen, argon, or nitrogen oxides.

57. The method of claim 55, wherein said gas is used to pressurize a chamber.

58. The method of claim 55, wherein said gas is used to sparge or purge an aqueous solution for the purpose of increasing the concentration of the sparging gas in the solution.

59. The method of claim 55, wherein said gas is used to sparge or purge an aqueous solution for the purpose of decreasing the concentration of the gases initially present in the solution.

60. The method of claim 55, wherein said gas is used to remove particulate material from surfaces.

61. An immobilization and contacting medium for microorganisms, comprising apatite and a binder therefor, and is in the form of a rigid, porous block or a sheet.

62. The immobilization and contacting medium of claim 61, further comprising one or more microorganisms disposed within the pores thereof.